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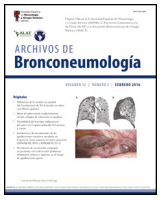

Original Article

Benchmarking in Thoracic Surgery. Third Edition☆

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ABSTRACT

Introduction: Benchmarking entails continuous comparison of efficacy and quality among products and activities, with the primary objective of achieving excellence.
Objective: To analyze the results of benchmarking performed in 2013 on clinical practices undertaken in 2012 in 17 Spanish thoracic surgery units.
Methods: Study data were obtained from the basic minimum data set for hospitalization, registered in 2012. Data from hospital discharge reports were submitted by the participating groups, but staff from the corresponding departments did not intervene in data collection. Study cases all involved hospital discharges recorded in the participating sites. Episodes included were respiratory surgery (Major Diagnostic Category 04, Surgery), and those of the thoracic surgery unit. Cases were labeled using codes from the International Classification of Diseases, 9th revision, Clinical Modification. The refined diagnosis-related groups classification was used to evaluate differences in severity and complexity of cases.
Results: General parameters (number of cases, mean stay, complications, readmissions, mortality, and activity) varied widely among the participating groups. Specific interventions (lobectomy, pneumonectomy, atypical resections, and treatment of pneumothorax) also varied widely.
Conclusions: As in previous editions, practices among participating groups varied considerably. Some areas for improvement emerge: admission processes need to be standardized to avoid urgent admissions and to improve pre-operative care; hospital discharges should be streamlined and discharge reports improved by including all procedures and complications. Some units have parameters which deviate excessively from the norm, and these sites need to review their processes in depth. Coding of diagnoses and comorbidities is another area where improvement is needed.

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Benchmarking en cirugía torácica. Tercera edición

Palabras clave:
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R E S U M E N

Introducción: *Benchmarking* hace referencia a la comparación continuada de la eficiencia y la calidad entre productos y actividades con el objetivo fundamental de alcanzar la excelencia.
Objetivo: Analizar los resultados del *benchmarking* realizado en 2013 con la actividad asistencial de Cirugía Torácica en el año 2012 en 17 servicios de Cirugía Torácica españoles participantes.
Métodos: La fuente de información para el estudio ha sido el conjunto mínimo básico de datos de hospitalización correspondiente al año 2012. Los datos han sido proporcionados por los centros participantes, a partir de los informes de alta hospitalaria, sin intervención de los responsables de los correspondientes servicios asistenciales. Los casos objeto del estudio han sido todas las altas de hospitalización registradas en los centros participantes. Los episodios incluidos han sido los de enfermedad quirúrgica respiratoria (CDM4-Q) y los del servicio de Cirugía Torácica. La identificación de estos casos se realizó usando los códigos de la novena edición de la Clasificación Internacional de Enfermedades, Modificación Clínica. Para valorar las diferencias en gravedad y complejidad de los casos se ha utilizado la clasificación de los grupos relacionados por el diagnóstico refinados.
Resultados: Los diversos parámetros generales estudiados (casuística, estancia media, complicaciones, readmisiones, mortalidad y actividad) han tenido una gran variabilidad entre los participantes. El análisis concreto de intervenciones (lobectomía, neumonectomía, resecciones atípicas y neumotórax), también han oscilado considerablemente.
Conclusiones: Se observa, al igual que en ediciones previas, una considerable variabilidad entre los grupos participantes. Existen áreas de mejora evidentes: estandarización de los procesos de admisión, evitando ingresos urgentes y mejorando la estancia preoperatoria; agilización de las altas hospitalarias y mejora de los informes de alta, reflejando toda la actividad y las complicaciones habidas. Algunas unidades de Cirugía Torácica deben hacer una revisión profunda de sus procesos porque pueden tener algunos parámetros con una desviación excesiva de la norma. También deben mejorarse los procesos de codificación de diagnósticos y comorbilidades.

Introduction

Benchmarking (BM) is the process of comparing services. The aim of BM is to evaluate efficacy and efficiency, in the pursuit of excellence in standard practice.[1] Its application in healthcare services has been limited to date, and only a few experiences in public health services and some hospital specialties have been published.[2,3]

In Spain, the first BM study in thoracic surgery departments was conducted in 2004, examining data from 2002 and 2003, with the participation of 9 units.[4] In this first edition, proposals were made for improving the data recorded in discharge reports, avoiding unnecessary hospital admissions, and standardizing measures aimed at improving the quality of lung resections. The second BM study was conducted in 2008, with the participation of 13 units.[5] A third procedure was undertaken in 2013, in which 17 units participated, the results of which are presented in this article.

Methods

Participating Centers

A total of 17 thoracic surgery units (TSU), all in university hospitals, participated in this study (Annex 1). In this edition, the thirteen units previously involved in the second BM study were joined by a further 4 TSUs.

Data Source

Information was obtained from the minimum basic data set (MBDS) for hospitalization in 2012, retrieved from discharge reports issued during that period. The data was processed, anonymously and independently, by IASIST S.A., a company specializing in the conduct of studies of this type. The databases of 33 teaching hospitals from the Spanish National Health Service were used as an external reference pattern, known as the external norm (EN).

Case Selection

For the purpose of comparison, 13 of the participating centers were used to determine an internal norm for the BM (4 centers were excluded, as their MBDS were incomplete). Cases of major pulmonary resection for lung cancer were selected (lobectomies, pneumonectomies, atypical segmental resections, and video-assisted lobectomies). These cases were identified using the codes of the 9th edition of the 2008 International Classification of Diseases, Clinical Modification (ICD-9-CM) retrieved from the records of the surgical procedures. The following cases were selected: lobectomy (codes ICD-9-CM: 32.3 and 32.4), pneumonectomy (codes ICD-9-CM: 32.5 and 32.6), video-assisted lung resections (codes ICD-9-CM: 32.20, 32.25 and 32.28), atypical segmental resections (code ICD-9-CM 32.29), pneumothorax (code ICD-9-CM 512.0 and 512.8). To ensure that all thoracic surgery activity was recorded, surgical cases coded CM 04 (respiratory system) were also included.

Performance Indicators

Complexity of the Case-Mix

The following indicators were used:

- Mean weight. Calculated from the diagnosis-related groups (DRG), version AP 21: all patients seen in all hospitals were classified.
- Relative weight. This is the ratio between the mean weight of the BM study cases and the mean weight of the external norm. This is a measure of the complexity of the case-mix compared to the external norm.
- Indicators of performance outcomes, such as average length of stay (ALOS) and readmissions, were adjusted by case-mix, using refined DRG, with a subclassification of DRG in categories of severity based on secondary diagnoses recorded for each patient.